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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,168	12/13/2001	Michael D. James	GB 000182	3955

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EXAMINER

POWERS, WILLIAM S

ART UNIT PAPER NUMBER

2134

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/022,168	JAMES, MICHAEL D.	
	<b>Examiner</b>	<b>Art Unit</b>	
	William S. Powers	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 9 states that a digital television unit is "configured for outputting decoding authorization data so as to remotely control decoding of a coded digital television signal received at another digital television unit" (claim 9, lines 5-7). The Examiner can find no reference to remotely controlling the decoding of encoded digital television signals at one digital television unit from another digital television unit in the specification or figures 4. There is evidence to support the transferring of decryption keys, but there is no evidence that the decoding is controlled by the inputting means of another digital television unit.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear from the claim language and the specification how the decoding of digital television signals at one digital television unit is remotely controlled from another digital television unit.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 8, 13, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,886,732 to Humpleman in view of US Patent No. 6,038,625 to Ogino, further in view of US Patent No. 6,826,699 to Sun.

As to claim 1, Humpleman teaches:

- a. A distributed digital television system comprising: a plurality of discrete television sets (column 3, lines 1-13).
- b. Decoding digital television signals for display at the (respective) television sets (column 7, lines 29-48).
- c. A plurality of respective distributed signal decoding arrangements having respective cryptographic engines configured for executing conditional access (a distributed system with a conditional access programming subsystem that incorporates encryption/decryption for authentication and authorization (user password, credit card numbers, etc.) (column 9, lines 43-49 and column 10, lines 52-61).

Humpleman does not expressly mention direct communication between televisions. However, in an analogous art Ogino teaches a system being configured for transferring, over a network linking the plural sets and from a source from among said arrangements to a destination from among said arrangements (a peer-to-peer network that comprises smart televisions that have the ability to transmit data with each other over an IEEE 1394 serial communications bus in order “to control one another and obtain information regarding one another” (Ogino, column 2, lines 55-57) and enhance the coordination of audio/visual devices that are interconnected and share resources (Ogino, column 2, lines 59-65)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the digital television network of Humpleman with the intercommunication between devices of Ogino in order “to control

one another and obtain information regarding one another” (Ogino, column 2, lines 55-57) and enhance the coordination of audio/visual devices that are interconnected and share resources as suggested by Ogino (Ogino, column 2, lines 59-65).

Neither Humpleman nor Ogino specifically teach a security protocol for transmission of data including authentication data and encryption key exchange within the local network. However, in an analogous art Sun teaches a decryption key usable for conditional access by the respective cryptographic engine of the destination arrangement (the use of 5C Digital Transmission Content Protocol authentication and key exchange, 5C DTCP AKE (Sun, column 6, lines 45-50) in order to “provide a means for protecting the owner’s property rights” (Sun, column 1, lines 29-30) as suggested by Sun.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the peer-to-peer digital television network Humpleman and Ogino with the added network security features of Sun in order to “provide a means for protecting the owner’s property rights” (Sun, column 1, lines 29-30) as suggested by Sun.

As to claim 2, Humpleman as modified teaches that a network comprises a television signal distribution network for delivering digital television signals to the television sets (a network that distributes digital television signals to television sets) (Humpleman, column 3, lines 62-67).

As to claim 3, Humpleman as modified teaches a network includes filters (Humpleman, column 8, lines 60-64) and radio frequency feeder cables mutually arranged to selectively route keys transferred in said transferring and said signals (a network that uses hybrid coaxial cables as a transmission medium (Humpleman, column 6, lines 53-60). Humpleman further teaches that the cables can transmit analog television signals, which are within the RF spectrum (Humpleman, column 3, lines 3-7)).

As to claim 4, Humpleman as modified teaches performing said transferring under a separate cryptographic layer of security (using of 5C Digital Transmission Content Protocol authentication and key exchange, 5C DTCP AKE (Sun, column 6, lines 45-50)).

As to claim 5, Humpleman as modified teaches each television set includes an arrangement of said distributed signal decoding arrangements (Humpleman, column 7, lines 39-43).

As to claim 8, Humpleman as modified teaches:

- a. A digital signal decoding arrangement for receiving coded digital television signals (a digital television) (Humpleman, column 3, lines 1-13) with decoding arrangement (Humpleman, column 7, lines 29-48)).
- b. A conditional access module configured for the input and output of decryption keys serving to control the decoding of the digital television signal (a

distributed system with a conditional access programming subsystem that incorporates encryption/decryption for authentication and authorization (user password, credit card numbers, etc.) (Humpleman, column 9, lines 43-49 and column 10, lines 52-61)).

Humpleman does not expressly mention direct communication between televisions. However, in an analogous art Ogino teaches using the decryption keys either locally within the apparatus by means of said input or remotely at further digital television, apparatus by means of said output (a peer-to-peer network that comprises smart televisions that have the ability to transmit data with each other over an IEEE 1394 serial communications bus in order "to control one another and obtain information regarding one another" (Ogino, column 2, lines 55-57) and enhance the coordination of audio/visual devices that are interconnected and share resources as suggested by Ogino (Ogino, column 2, lines 59-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the digital television network of Humpleman with the intercommunication between devices of Ogino to enhance the coordination of audio/visual devices that are interconnected and share resources as suggested by Ogino (Ogino, column 2, lines 59-65).

Humpleman as modified does not expressly mention a security protocol for transmission of data including authentication data and decryption keys within the local network. However, in an analogous art Sun teaches the use of 5C Digital Transmission Content Protocol authentication and key exchange, 5C DTCP AKE (Sun, column 6,



lines 45-50) in order to “provide a means for protecting the owner’s property rights” (Sun, column 1, lines 29-30) as suggested by Sun.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the peer-to-peer digital television network Humpleman as modified with the added network security features of Sun in order to “provide a means for protecting the owner’s property rights” (Sun, column 1, lines 29-30) as suggested by Sun.

As to claim 13, Humpleman as modified teaches said plurality [of television sets] includes at least three sets, said system being further configured for said transferring from any one to any other (a network with “any number” of television sets (Humpleman, column 10, lines 28-36) and a peer-to-peer communication network (Ogino, column 6, lines 15-30)).

As to claim 14, Humpleman as modified teaches said transferring restricts display at said source, of specific broadcasted content whose display transferring authorizes at said destination (the use of restricted access television programming at an individual apparatus (Humpleman, column 10, lines 41-61)).

As to claim 15, Humpleman as modified teaches said plurality includes at least three sets, said system being further configured for said transferring from any one to

any other (a network with “any number” of television sets (Humpleman, column 10, lines 28-36) and a peer-to-peer communication network (Ogino, column 6, lines 15-30)).

As to claim 17, Humpleman as modified teaches that inputting locally authorizes display, at the apparatus, of specific broadcasted content, said inputting serving to input a decryption key outputted from said further apparatus, the outputting restricting display of said content at said further apparatus (the use of restricted access television programming at an individual apparatus chosen by the user (Humpleman, column 10, lines 41-61)).

As to claim 18, Humpleman as modified teaches a television system including both the local, and further, digital television apparatus (a network with “any number” of television sets (Humpleman, column 10, lines 28-36)).

As to claim 19, Humpleman as modified teaches that inputting locally authorizes display, at the apparatus, of specific broadcasted content, said inputting serving to input a decryption key outputted from said further apparatus, the outputting restricting display of said content at said further apparatus (the use of restricted access television programming at an individual apparatus chosen by the user) (Humpleman, column 10, lines 41-61).

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,826,699 to Sun in view of US Patent No. U.S. Patent No. 5,237,610 to Gammie et al. (hereinafter Gammie).

As to claim 9, Sun teaches:

a. Means for inputting decoding authorization data so as to control, locally within the unit, decoding of a coded digital television signal received, said means being further configured for outputting decoding authorization data so as to remotely control decoding of a coded digital television signal received at another digital television (receiving and transferring decryption keys to devices within the network that satisfy the 5C DTCP AKE protocol requirements) (column 4, lines 47-51, column 6, lines 15-44 and column 9, lines 27-36).

Sun does not expressly mention demultiplexing means in the digital television devices.

However, in an analogous art, Gammie teaches:

b. A paired television set and digital decoding arrangement that includes demultiplexing means for splitting, from a received digital television signal, said decoding authorization data for local control (the demultiplexing decoding data from the program data with a demultiplexer (column 12, lines 20-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the digital television network of Sun with the

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demultiplexing means of Gammie in order to protect programming from pirates as suggested by Gammie (column 3, lines 11-23).

7. Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,886,732 to Humpleman in view of US Patent No. 6,826,699 to Sun.

As to claim 10, Humpleman as modified teaches:

- a. A digital television system comprising a plurality of discrete television sets (Humpleman, column 10, lines 28-36).
- b. Decoding incoming television signals locally at each television set (Humpleman, column 7, lines 29-48).

Humpleman does not expressly mention direct communication between televisions.

However, in an analogous art Sun teaches transferring a decryption key from a conditional access module of a digital decoding arrangement associated with one television set for operation in association with a conditional access module of a digital decoding arrangement associated with another television set (a point-to-point network that comprises digital televisions that have the ability to transmit data with each other over an IEEE 1394 serial communications (Sun, column 6, lines 15-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the invention of Humpleman with the

secure exchange decryption keys of Sun in order in order to "provide a means for protecting the owner's property rights" (Sun, column 1, lines 29-30) as suggested by Sun.

As to claim 22, Humpleman as modified teaches said plurality includes at least three sets, said system being further configured for said transferring from any one to any other (a network with "any number" of television sets (Humpleman, column 10, lines 28-36).

8. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,886,732 to Humpleman in view of US Patent No. 6,038,625 to Ogino, further in view of US Patent No. 6,826,699 to Sun as applied to claim 1 above, and further in view of US Patent Application No. 2001/0030959 to Ozawa et al. (hereinafter Ozawa).

As to claim 11, Humpleman as modified teaches a network interface module that decrypts incoming transmissions and handles access control (Humpleman, column 7, lines 49-59) and Ogino teaches a peer-to-peer network that comprises smart televisions that have the ability to transmit data with each other over an IEEE 1394 serial communications bus in order "to control one another and obtain information regarding one another" (Ogino, column 2, lines 55-57). Humpleman as modified does not expressly mention the use of a smart card. However, in an analogous art, Ozawa teaches transferring of the decryption key transfers from a smart card of said source

arrangement to a smart card of said destination arrangement (the use of a smart card in a set top box in order to "provide the key for decoding incoming cryptographic data for content that the CAM [smart card] determines the user is authorized to receive" (Ozawa, page 3, paragraph 31) as suggested by Ozawa).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to implement the invention of Humpleman, Ogino and Sun with the smart card of Ozawa in order to "provide the key for decoding incoming cryptographic data for content that the CAM [smart card] determines the user is authorized to receive" (Ozawa, page 3, paragraph 31) as suggested by Ozawa.

As to claim 12, Humpleman as modified teaches communicating with a radio frequency local area network established between ones of said sets (Humpleman, column 3, lines 3-7)

9. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,886,732 to Humpleman in view of US Patent No. 6,826,699 to Sun, as applied to claim 10 above, in further view of US Patent Application No. 2001/0030959 to Ozawa et al. (hereinafter Ozawa).

As to claim 20, Humpleman as modified does not expressly mention the use of a smart card. However, in an analogous art Ozawa teaches transferring of the decryption key transfers from a smart card of said source arrangement to a smart card of said

destination arrangement (the use of a smart card in a set top box in order to “provide the key for decoding incoming cryptographic data for content that the CAM [smart card] determines the user is authorized to receive” (Ozawa, page 3, paragraph 31) as suggested by Ozawa).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to implement the invention of Humpleman as modified with the smart card of Ozawa in order to “provide the key for decoding incoming cryptographic data for content that the CAM [smart card] determines the user is authorized to receive” (Ozawa, page 3, paragraph 31) as suggested by Ozawa.

As to claim 21, Humpleman teaches communicating with a radio frequency local area network established between ones of said sets (Humpleman, column 3, lines 3-7)

### ***Response to Arguments***

10. As to Applicant’s argument that Humpleman “executes conditional access (col. 7, lines 49-50: ‘access control’) not ‘at the television sets,’ but within the network interface module 50 (col. 7, line 51),” the access control of Humpleman deals with managing access to the various external networks so that the different media output devices (TV, computers, printers, etc.) receive the proper signals (column 1, line 66-column 2, line 23). The video on demand reference of Humpleman is conditional access.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., network interface and separation of network interface from set-top electronics) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As to Applicant's argument that Ogino does not show the sharing of authorization data, the Office Action does not suggest that Ogino teaches the sharing of authorization data. Ogino teaches a network of smart televisions that communicate directly with each other.

In response to applicant's argument that the Ethernet and IEEE1394 were incompatible at the time the invention was made, the Examiner cannot find a limitation in the claims about the type of network by which "the arrangements" of the instant application are connected. Additionally, the IEEE 1394 protocol of Ogino is used as an example of a network protocol (column 2, lines 48-55).

As to Applicant's argument that there is an unclear nexus between the decryption key exchange between sink devices in the Sun patent and the "decryption key usable for conditional access" in claim 1, Applicant is directed to column 1, lines 27-43 of the Sun patent. Before a sink device can receive a decryption key it must be authenticated. Authentication is a condition that must be satisfied in order to get a decryption key and thereby gain access to desired programming of the Sun patent. If the sink device does



not meet the conditions of authentication, it does not receive the decryption key and consequently cannot access the desired programming.

As to Applicant's argument that there is no evidence of a cryptographic engine in each television of the combined references, Applicant is directed to column 7, lines 39-43 of Humpleman. It clearly states that decoding occurs at the display terminal. There is a decoding means (cryptographic engine) at each respective television.

Applicant's arguments, see page 10-11, filed 5/30/2006, with respect to the rejection(s) of claim(s) 9 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the cited patents in the Office Action and US Patent No. 6,038,625 to Ogino et al. and US Patent No. 6,826,699 to Sun.

Applicant's arguments, see page 11-12, filed 5/30/2006, with respect to the rejection(s) of claim(s) 10, 20, 21 and 22 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the cited patents in the Office Action and US Patent No. 6,826,699 to Sun.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William S. Powers whose telephone number is 751 272 8573. The examiner can normally be reached on m-f 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on 571 272 6962. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



8/8/2006

William S. Powers  
Examiner  
Art Unit 2134



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